Primary cutaneous mucormycosis of the scalp

Bommie Florence Seo1, Jeong Hwa Seo1, Gyeol Yoo2

1Department of Plastic and Reconstructive Surgery, Uijeongbu St. Mary’s Hospital, College of Medicine, The Catholic University of Korea, Seoul; 2Department of Plastic and Reconstructive Surgery, Incheon St. Mary’s Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

Correspondence: Gyeol Yoo
Department of Plastic and Reconstructive Surgery, Incheon St. Mary’s Hospital, College of Medicine, The Catholic University of Korea, 56 Dongsu-ro, Bupyeong-gu, Incheon 21431, Korea
Tel: +82-32-280-5184, Fax: +82-32-510-2370, E-mail: psyg@catholic.ac.kr

Mucormycosis is a fungal infection caused by the Zygomycetes class and genus of Mucorales, which usually reside in soil or plants. While daily exposure is common, infection has only been reported in immunocompromised patients. Because the route of exposure is usually fungal spores via air, human mucormycosis usually occurs in the form of pulmonary or rhinocerebral infections. Primary cutaneous mucormycosis is a rare form of the entity, reported to have rapid progression and high mortality. An 83-year-old male who had finished his sixth cycle of chemotherapy for small cell lung cancer, presented with pus-like discharge from two openings on the scalp and swelling of his left peri-orbital region, with chemosis of his conjunctiva and decreased ocular motility in all directions but no diplopia (Fig. 1).

Magnetic resonance imaging showed myositis of the superior rectus muscle and optic neuritis, but no brain involvement (Fig. 2). Wound cultures were negative for microorganisms and there was no significant response to intravenous antibiotics or debridement. A biopsy was performed and histopathology revealed thick-walled non-septate hyphae, with irregular wide-angle branches, consistent with the diagnosis of primary cutaneous mucormycosis (Figs. 3, 4). We immediately
administered systemic amphotericin B (1 mg/kg/day) and his wounds and the orbital lesion healed rapidly within 20 days. Primary cutaneous mucormycosis occurs uncommonly, and is usually caused by direct inoculation by fungal spores into the skin in immunocompromised patients. Intravenous amphotericin B is an effective first-line therapy. While the presentation of cutaneous mucormycosis may resemble cellulitis or cutaneous abscesses of variable causes, the physician should have a high degree of suspicion for early diagnosis and proper, effective treatment.

NOTES

Conflict of interest
No potential conflict of interest relevant to this article was reported.

Ethical approval
The study was approved by the Institutional Review Board of the Catholic Medical Center (IRB No. OC20ZISI0012) and performed in accordance with the principles of the Declaration of Helsinki. Written informed consent was obtained.

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Patient consent
The patient provided written informed consent for the publication and the use of his images.

Author contribution

ORCID
Bommie Florence Seo https://orcid.org/0000-0002-6907-5962
Jeong Hwa Seo https://orcid.org/0000-0002-0911-4747
Gyeol Yoo https://orcid.org/0000-0002-1029-8643